S.A.F.E.air
The world’s leading filtration and pressurisation system

Greater return on investment

Safer working environment

Future proofing your mine site

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QUICK REMOVAL OF RESIDUAL IN CABIN
Occupants entering into the cabin expose the cabin to the outside dust. Once the cabin door is shut the S.A.F.E.air unit quickly removes the contaminated air via the suction pipe through to the HEPA filters to deliver clean air back into the cabin.

INCREASED AIR CONDITIONING PERFORMANCE
There is increased air conditioning system reliability due to the integration of the vehicle’s air conditioning system with the S.A.F.E.air unit.

HOSPITAL GRADE AIR
The HEPA filters provide hospital grade air into the cabin for the occupant.

LEAK PROOF SYSTEM
The suction line remains under positive pressure at all times. In the unlikely event of a hole occurring in the suction line, the air will still flow out the suction pipe and not back into the cabin due to the positive pressure.

EXTENDED LIFETIME OF ELECTRONIC COMPONENTS IN CABIN
All of the cabin’s electronic components such as switches and connectors last longer because they are not exposed to dust. In addition, the end of shift cleaning time is greatly reduced.

CONSISTENT MINIMUM 100Pa PRESSURE
The S.A.F.E.air system delivers a constant minimum required pressure of 100Pa. The air conditioner fan speed knob controls the required pressure in the cab to 100Pa, although the industry standard is 50Pa. Should there be any leakage due to open window(s), the fan speed can be increased by the driver to achieve minimum pressure required in the cab.

REDUCED CO₂ LEVEL IN CABIN
When a new S.A.F.E.air unit is fitted to a mine vehicle, the cab is deliberately not entirely sealed. Purged air is exchanged for HEPA clean, fresh air resulting in lower levels of CO₂ in the cabin.

CLEAN EVAPORATIVE COIL
The evaporative coil of the vehicle’s air conditioner remains clean, as it is not exposed to dust due to integration with the S.A.F.E.air unit.

INTERACTIVE TOUCH SCREEN PANEL
An interactive touch screen panel mounted inside the cab with password protected settings and alarm set to minimum 50Pa to alert the driver to take corrective action.

How S.A.F.E.air works:

A. PRE FILTER ASSEMBLY (FILTER HEAVY CONTAMINANTS)
The fresh air enters into the Pre-Filter assembly, and filters out the heavy contaminant dust particles through the cyclonic dust ejection system.

B. FIRST STAGE FILTER (FILTER COARSE DUST PARTICLES)
The air moves through to the first stage Pre-Filter and filters out coarse dust particles.

C. 2ND STAGE HEPA FILTER (FILTER SUB MICRON PARTICLES)
The second stage HEPA filters then remove finer sub micron particles from the air.

D. SNORKEL (REIRCULATION LINE)
The fan draws the air from the bottom rear of the cabin, pulling any contaminants dislodged from occupant clothing/shoes away from their breathing zone. This air is recirculated back to the 3rd stage HEPA filters via the snorkel where it is combined with fresh air from stage 2.

E. 3RD STAGE HEPA FILTER (FILTER SUB MICRON PARTICLES)
The fresh air in conjunction with the recirculated air is then filtered through the 3rd stage HEPA filters to eliminate sub micron particles.

F. MANIFOLD CONNECTION TO A/C (CLEAN AIR TO CABIN)
The clean HEPA filtered air then enters the manifold connection to A/C Unit and enters the cabin via the air vents, into the breathing zone of the occupant(s).

G. AIR CONDITIONER SYSTEM

See the difference:

Without S.A.F.E.air
After 3 months

With S.A.F.E.air
After 5 years

We deliver a SAFER mine site
S.A.F.E.air

Future proof your mine site and the safety of your workers

Offices & control rooms

Light vehicles

Haul trucks

Loading equipment

Respirable dust
Mineral fibres, silica, coal, sulphur dioxide

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